

Notice of Allowability

Application No.

10/759,335

Examiner

Shih-Chao Chen

Applicant(s)

NALBANDIAN, VAHAKN

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed on Jan. 16, 2004.
2. ☒ The allowed claim(s) is/are 1-60.
3. ☒ The drawings filed on 16 January 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Shih-Chao Chen
SHIH-CHAO CHEN
PRIMARY EXAMINER

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claim 3, line 2, "said radiating arches" is changed to --said radiating arch--.

In claim 3, line 3, "said radiating arches" is changed to --said radiating arch--.

Allowable Subject Matter

2. Claims 1-60 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 1-16 and 32-46 is the inclusion of the limitations of a center probe of a coaxial connector projects upwardly through the ground plane, the dielectric substrate and an opening in a first one of the segments, the opening having an opening diameter greater than a probe diameter of the center probe prevents an electrical contact between the center probe and the first segment; and the radiating arch having an inner edge, an outer edge, a first straight end, a second straight end and a path length difference between the plurality of gaps, the inner edge being shorter than said outer edge. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 17-31 is the inclusion of the limitations of a power supply network disposed beneath the ground plane feeds RF power to a plurality of center probes projecting upwardly through the ground plane, the dielectric substrate and the openings, the openings each having an opening diameter greater than a probe diameter of the center probe prevents an electrical contact between the center probe and the first segments; and each of the plurality of radiating arches having an inner edge, an outer edge, a first straight end, a second straight end and a path length difference between the plurality of gaps, the inner edges being shorter than the outer edges. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 47-60 is the inclusion of the limitations of the steps of forming a radiating arch from the segments, the radiating arch having an inner edge, an outer edge, a first straight end, a second straight end and a path length difference between the plurality of narrow gaps in the radiating arch, the inner edge being shorter than the outer edge; and projecting a center probe of a coaxial connector upwardly through the ground plane, the dielectric substrate and an opening in a first one of the segments, the opening having an opening diameter greater than a probe diameter of the center probe prevents an electrical contact between the center probe and the first segment. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Noujeim (U.S. Patent No. 6,839,030) teaches the leaky-wave microstrip antenna includes a grounded element, a dielectric member coupled to the grounded element and a top conducting strip coupled to the dielectric member, the conducting strip including a first and second non-radiating conducting strip and a plurality of radiating cells.

However, Noujeim does not disclose or suggest a center probe of a coaxial connector projects upwardly through the ground plane, the dielectric substrate and an opening in a first one of the segments, the opening having an opening diameter greater than a probe diameter of the center probe prevents an electrical contact between the center probe and the first segment; and the radiating arch having an inner edge, an outer edge, a first straight end, a second straight end and a path length difference between the plurality of gaps, the inner edge being shorter than said outer edge.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (571) 272-1819. The examiner can normally be reached on Monday-Friday from 7 AM to 4:30 PM, First Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shih-Chao Chen
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Art Unit 2821

SHIH-CHAO CHEN
PRIMARY EXAMINER

SXC
May 31, 2005